

NEW NAMES FOR AUSTRALIAN FISHES.

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Plates xxv.-xxvii.

Family HEPTRANCHIIDAE.

Genus HEPTRANCHIAS Rafinesque, 1810.

HEPTRANCHIAS DAKINI, new species.

A new specific name is required for the south-eastern Australian species figured by McCulloch (Zool. Res. Endeavour, i., 1911, 2, pl. i., and fig. 1) as *Heptranchias perlo* (Bonnaterre), as it appears to differ from that European species notably in having the head $4\frac{1}{2}$ in total length and anal originating below middle of dorsal, with its base shorter than that of dorsal. The holotype of *H. dakini* is the specimen from sixty miles south of Cape Everard, Victoria, figured by McCulloch.

Named after Professor W. J. Dakin, of the University of Sydney.

Family HETERODONTIDAE.

MOLOCHOPHRYS, new genus.

Orthotype, *Cestracion galeatus* Günther (Cat. Fish. Brit. Mus., viii., 1870, 416, Australia; i.e., New South Wales) = *Molochophrys galeatus*.

Supraorbital crest high, terminating abruptly behind the orbit. Origin of first dorsal above posterior end of base of pectoral. Posterior caudal lobe with the hind margin obliquely truncate, without incision. No spots on body or fins. Egg-case with long tendrils at one end.

The Crested Port Jackson Shark (*Molochophrys galeatus*) has much higher supraorbital crests than the Common Port Jackson Shark (*Heterodontus portusjacksoni*), which is also differently coloured. I may here remark that *Squalus philippinus* Shaw (Gen. Zool., v., 2, Pisc., 1804, 342. *Ex* Lacépède. Botany Bay) and *Squalus jacksonii* Turton (Syst. Nat. Linné, 1806, 922; Bullock, Compan. Bullock's Mus., ed. 8, 1810, 60 and Compan. London Mus., ed. 17, 1814, 90 and pl. —, figs. 1-2, Port Jackson) are synonyms of *Heterodontus philippi* (Bloch and Schneider) auct. = *Squalus portusjacksoni* Meyer, 1793, which have been generally overlooked. A true Squalid Shark from the Philippine Islands named *Squalus philippinus* by Smith (Proc. U.S. Nat. Mus., xli., 1912, 677, pl. li. Off Luzon) is unfortunately preoccupied by Shaw's name, and may now be known as *Squalus montalbani*, new species.

Family CARCHARINIDAE.

NOTOGALEUS, new genus.

Orthotype, *Galeus australis* Macleay (Proc. Linn. Soc. N.S. Wales, vi., September 12, 1881, 354. Port Jackson) = *Notogaleus australis*.

First dorsal situated over a space about midway between pectorals and ventrals. Second dorsal subequal to anal, and originating a little in advance of it. Subcaudal lobe well developed, giving a characteristic "double-tailed" appearance. Coloration greyish, without spots or bars.

Family SCYMNORHINIDAE.

SCYMNORHINUS PHILLIPPSI, new species.

New name for *Scymnorhinus licha* McCulloch (Biol. Res. Endeavour, ii., 1914, 81, pl. xiv., fig. 1 and text-fig. 1) which, as McCulloch hinted, is obviously not conspecific with the French *Squalus licha* Bonnaterre (Tabl. Encycl. Meth., Ichth., 1788, 12). The holotype is the male described and

figured by McCulloch, and the type-locality is the Great Australian Bight, in deep water.

Named after Mr. William John Phillipps, the New Zealand ichthyologist.

Family ECHINORHINIDAE.

Genus ECHINORHINUS Blainville, 1816.

ECHINORHINUS (RUBUSQUALUS) MCCOYI, new subgenus and species.

New name for *Echinorhinus spinosus* McCoy (Prodr. Zool. Viet., ii., dec. xv., October, 1887, 165, pl. cxliv. Portland, Victoria), which is obviously distinct from the European *Squalus spinosus* Gmelin (Syst. Nat. Linné, ed. 13, i., 3, 1789, 1500) = *Squalus brucus* Bonnaterre (Tabl. Encycl. Meth., Ichth., 1788, 11. "L'Océan"), as McCoy himself noted the numerous discrepancies in descriptions and figures. The holotype of *E. mccoyi* is the specimen (No. 50,760) in the National Museum, Melbourne, which was figured by McCoy in his excellent "Prodromus." It differs from a specimen of *Echinorhinus brucus* in the Australian Museum from Tuscany in having the eye over anterior portion of mouth, thicker and heavier tail, dorsal fins closer together, and first dorsal originating over anterior portion of anal, instead of originating almost over the middle of that fin. These changes in the positions of the fins induce me to regard *Echinorhinus mccoyi* as the genotype of a new subgenus, *Rubusqualus*.

Family ENGRAULIDAE.

AUSTRANCHOVIA, new genus.

Orthotype, *Atherina australis* White (Journal of a Voyage to new South Wales, 1790, 296 and fig.) = *Austranchovia australis*.

Gill-membranes united across isthmus anteriorly by a fine membrane. Ventral surface scarcely carinate, entirely without scutes. No free dorsal spine. Alar scale large. Anal fin free from the forked caudal and entirely behind dorsal. This new genus enters the *Cetengraulis* section of the key given by Jordan and Seale (Bull. Mus. Comp. Zool. Harvard, lxxvii., May, 1926, 358), but has fewer gill-rakers and anal rays, and more vertebrae than that American genus.

The type-species of *Austranchovia* has been fully dealt with by McCulloch (Rec. Austr. Mus., xiii., 1920, 43, pl. xii., fig. 1).

Family MURAENIDAE.

VERDITHORAX, new genus.

Orthotype, *Muraena prasina* Richardson (Zool. Voy. Erebus and Terror, Fish., 1848, 93. Bondi Bay, N.S.W. Type in Brit. Mus. = *Verdithorax prasinus*.

Mesial intermaxillary teeth slender. More than five teeth in inner maxillary row. Vomerine teeth biserial anteriorly and forming a single row posteriorly (Richardson). Posterior nostrils without elevated rim. Dorsal fin commencing a little before vertical of gill-opening.

Coloration nearly uniform bright green in life, but changing to dark brown after death. Several dark longitudinal grooves from angle of mouth and along throat. Eye blue. Specimens from New South Wales examined by me have depressible fangs on intermaxillary. Cleft of mouth almost half length of head, dorsal fin low and adipose.

Verdithorax prasinus is common amongst rocks along the New South Wales coastline and feeds on crabs and other animals. It is very vicious and many people have been bitten by this eel, though blood-poisoning has not apparently been recorded as a result (Paradice, Med. Journ. Austr., ii., 25, 1924, 650). Mr. F. McNeill made the following note on a specimen observed by him at Maroubra, near Sydney:—"The green pigment which

constitutes its colour-marking had stained the walls of its home, and for some distance in front the sand-grains were lightly tinted with the same colour." An adult example, nearly thirty inches long, was caught in 15 fathoms of water off North Head, Port Jackson, on December 5, 1926, by W. E. J. Paradise. It contained a large number of fair-sized eggs, the roe occupying a large portion of the abdominal cavity. Young Green Eels have been caught in rock-pools in November and December near Sydney.

Verdithorax krullii (Hector) is an allied New Zealand species.

Family AULOPIDAE.

LATROPISCIS, new genus.

Orthotype, *Aulopus milesii* Cuvier & Valenciennes (Hist. Nat. Poiss., xxii., 1849, 519; ed. 2, p. 385. Sydney, N.S. Wales) = *Latropiscis milesii*.

The genus *Aulopus* was first proposed by Cloquet (Dict. Sci. Nat., ed. 2, iii., 1816, suppl., 128. Ex Cuvier MS.) for "*Salmo filamentosus* Bloch," a species which Sherborn was unable to find in Bloch's works and which was perhaps based on a manuscript name. This specific name should apparently therefore be credited to Cloquet, and seems to be a synonym of *Aulopus tirus* (Rafinesque). Cuvier & Valenciennes (Hist. Nat. Poiss., ed. 2, xxii., 1849, 381-385) have given a thorough account of "*Aulopus filamentosus*, Cuv." from the Mediterranean Sea and described a new species, *A. milesii*, from Sydney. The differences between these two forms, as given by those authors, seem to be of generic importance, and I accordingly propose *Latropiscis* for *Aulopus milesii*.

The "Sergeant Baker" of New South Wales (*Latropiscis milesii*) differs in coloration from the Western Australian species (*Latropiscis purpurisatus*) described by Richardson (Icones Piscium, 1843, 6, pl. ii., fig. 3, as *Aulopus*. Houtmans Abrolhos).

Family MYCTOPHIDAE.

Genus NEOSCOPELUS Johnson, 1863.

NEOSCOPELUS BRUUNI, new species.

New name for *Neoscopelus macrolepidotus* McCulloch (Biol. Res. Endeavour, ii., 3, 1914, 90, pl. xvii) from the Great Australian Bight, which is different from *N. macrolepidotus* Johnson (Proc. Zool. Soc. Lond., April 29, 1863, 44, pl. vii.) from Madeira. The Australian form has the ventral fins farther forward, photophores in more regular rows and extending along caudal peduncle, shorter and broader maxillary and less deep body than the figured type of Johnson's species.

Named in honour of my friend, Mr. Anton Bruun, M.Sc., of Copenhagen, in recollection of our pleasant association during the memorable visit of the Royal Danish Research Steamer "Dana" to Australia.

Family SYNGNATHIDAE.

FESTUCALEX, new genus.

Orthotype, *Syngnathus cinctus* Ramsay (Proc. Linn. Soc. N.S. Wales, vii., 1, May 23, 1882, 111. Port Jackson, N.S.W. Type in Austr. Mus. seen) = *Festucalex cincta*.

Operculum with a short keel anteriorly. Snout nearly as long as rest of head. Less than twenty body-rings. Inferior and superior cristae of trunk continuous with those of tail. Median cristae of trunk rectilinear, not joined to others, ending on second or third tail-ring. No tooth-like spines on posterior tail-rings. Ventral surface of trunk flat. Brood-pouch subcaudal, formed by broad lateral flaps extending from behind the rudimentary anal fin for about fourteen tail-rings and reinforced by ribs extending from the margins of the two rows of subcaudal pits which hold the

large eggs. Anus well before middle of length. Dorsal, anal, and caudal fins present.

CAMPICHTHYS, new subgenus of FESTUCALEX.

Orthotype, *Ichthyocampus tryoni* Ogilby (Rec. Austr. Mus., i., 3, July, 1890, 56. Moreton Bay, Queensland. Type in Austr. Mus. seen) = *Festucalex* (*Campichthys*) *tryoni*.

Similar to *Festucalex*, but snout shorter than postorbital portion of head and ventral surface of trunk with a median crista.

FESTUCALEX (CAMPICHTHYS) RUNA, new species.

New name for the Sydney species described and figured by McCulloch (Rec. Austr. Mus., vii., 1909, 318, pl. xc., fig. 1) as *Ichthyocampus filum* which is evidently distinct from that species as Günther (Cat. Fish. Brit. Mus., viii., 1870, 178) united under that name what may be two species, with more body-rings than the Sydney one, from diverse localities. The type-locality of *Ichthyocampus filum* Günther is hereby designated Bay of Islands, New Zealand, so that the Freycinet Harbour form included with it may require a new name.

Subfamily HIPPOCAMPINAE.

FARLAPISCIS, new genus.

Orthotype, *Hippocampus breviceps* Peters (Monatsb. K. pr. Akad. Wiss. Berlin, 1869 (1870), 710. Adelaide, S. Australia) = *Farlapiscis breviceps*.

Head short. Snout $1\frac{1}{2}$ times diameter of orbit. Coronet high. Twelve or less body-rings. About twenty dorsal rays. Size small, generally less than three inches in length.

A Victorian specimen of *Farlapiscis breviceps* has been figured by McCoy (Prodr. Zool. Vict., dec. vii., 1882, 21, pl. lxx., fig. 2).

This genus also includes the West Australian *Hippocampus tuberculatus* Castelnau (Vict. Offic. Rec. Philad. Exhib., 1875, 48. Swan River). *Hippocampus brevirostris* Woodward (W. Austr. Year-book, 1900-01, i., 1902, 272. *Nomen nudum*. Fremantle. Not *H. brevirostris* Schinz, Das Tierreich (Cuvier) ii., 1822, 262, from Europe) may be designated a synonym of *Farlapiscis tuberculatus* (Castelnau).

I may mention here that *Hippocampus whitei* Bleeker (Verh. Kon. Akad. Wetensch. Amsterdam, ii., 1855, 17, sp. 311) based on the figure of the Hippocampus or Sea-horse in White's Voyage to new South Wales, 1790, is an earlier name for the common Sydney Sea-horse than *Hippocampus novae-hollandiae* Steindachner (Sitzb. Akad. Wiss. Wien, liii., 1866, 474, pl. i., figs. 2a-b. Port Jackson) and must be used in its stead. Bleeker, in the paper quoted, gave an excellent list of Australasian fishes, the forerunner of many later check-lists, but the new names proposed in that list have been generally overlooked. Thus *Platessa jenynsii* Bleeker (*loc. cit.*, p. 15, sp. 265) was introduced for *Platessa* sp. Jenyns (Voy. Beagle, Fish., 1842, 138) so that the Western Australian form of *Pseudorhombus multi-maculatus* Günther (Cat. Fish. Brit. Mus., iv., 1862, 427. Habitat?) may now be known as *Pseudorhombus jenynsii* (Bleeker). *Apistus jenynsii* Bleeker (*loc. cit.*, p. 8, sp. 75), based on *Apistus* sp. Jenyns is, however, evidently a synonym of *Apistus marmoratus* Cuvier & Valenciennes (Hist. Nat. Poiss., iv., November, 1829, 416. "Timor" (Peron); probably Western Australia), a species now known as *Gymnapistes marmoratus*.

Family HEMIRAMPHIDAE.

The Australian garfishes of this family are badly in need of revision, as many extralimital species have been recorded from our waters by various

authors whose identifications seem open to question. The names of the American genera *Hemiramphus* Cuvier, 1816, and *Hyporhamphus* Gill, 1860, have been applied to our species, but seem quite inapplicable, as the genotype of the former is *Esox brasiliensis* Linné, and that of the latter, *Hyporhamphus tricuspidatus* Gill, from Barbadoes. The authentic New South Wales species of "*Hemiramphus*" in McCulloch's Check-List (1922, 30-31) have been associated with *Hyporhamphus* Gill, with the exception of *H. far*, which is now called *Farhians commersoni* (Whitley, Austr. Zool., vi., August, 1930, 250). For our Sea and River Garfishes, at least, a new generic name is necessary.

REPORHAMPHUS, new genus.

Orthotype, *Hemiramphus australis* Steindachner (Sitzb. Akad. Wiss. Wien, liii., 1, 1866, 48. Port Jackson) = *Reporhamphus australis*.

The genotype is the common Sea Garfish of New South Wales which has been identified, for no apparent reason, as *Hemiramphus intermedius* Cantor, a Chinese species. Steindachner's name evidently applies to our species, which seems distinct from Cantor's. The Victorian form called *Hemiramphus melanochir* by Cuvier & Valenciennes and well figured by McCoy (Prodr. Zool. Vict., dec. xiv., 1887, pl. cxxxv., fig. 1) may be regarded as a distinct species, *Reporhamphus melanochir*.

REPORHAMPHUS ARDELIO, new species.

The River Garfish of New South Wales requires a new specific name as above. It has been called *Hemiramphus regularis* Günther (Cat. Fish. Brit. Mus., vi., 1866, 261), but the type-locality of that species is hereby designated West Australia, the only definite locality given by Günther, and this leaves the eastern Australian form nameless. The latter has been figured by Stead (Edible Fish. N.S. Wales, 1908, 37, pl. xi.) and may be known as *Reporhamphus ardelio*.

The Sea Garfish (*R. australis*) differs from the River Garfish (*R. ardelio*) in having the origin of the ventrals nearer the hypural joint than the gill-opening; slim body, long upper jaw, and deciduous scales.

ARDEAPISCIS, new genus.

Orthotype, *Hemiramphus welsbyi* Ogilby (Proc. Roy. Soc. Qld., xxi., 1908, 91. Moreton Bay, Queensland) = *Ardeapiscis welsbyi*.

Triangular part of upper jaw wider than long. Lower jaw longer than rest of head. Dorsal origin in advance of anal. Ventrals nearer base of caudal than base of pectoral.

Family MONOCENTRIDAE.

Genus CLEIDOPUS De Vis, 1882.

CLEIDOPUS GLORIAMARIS OCCIDENTALIS, new subspecies.

McCulloch (Rec. Austr. Mus., xiii., 4, April 12, 1921, 124-125) has pointed out that typical eastern Australian specimens of *Cleidopus gloriamaris* De Vis (Proc. Linn. Soc. N.S. Wales, vii., October 28, 1882, 368. Brisbane R., Queensland) have fourteen or fifteen scutes between shoulder and base of tail (De Vis gives 16) whereas Western Australian specimens have thirteen or fourteen, and that the dorsal spines of western specimens are smaller than those of the eastern ones. The Western Australian form may now be subspecifically named *occidentalis*, with McCulloch's Fremantle specimen as holotype.

Family NOMEIDAE.

Genus NOMEUS Cuvier, 1816.

NOMEUS DYSCRITUS, new species.

D.X i., 24; A.i/27. P.i/22; V.i/5; C.19. L.lat. 58.

Depth (25 mm.) 4, and head (27.5) 3.6 in length to hypural joint (101). Eye (7) equal to snout (7) and less than interorbital (8). Pectoral (32) longer than head.

Head pointed, profile concave before the eyes. Body compressed, fusiform. Eye large, equal to snout. Two large nostrils on each side. Maxillary not quite reaching vertical of anterior orbital border. Jaws equal, each with a row of small, spaced, curved, pointed teeth; similar teeth on vomer and palatines. Preorbital with a broad free edge, studded with pores. Other pores around chin and piercing scales on top of head. Preopercular angle with radiating serrations, other opercles entire. Head covered, except anteriorly, with weak, thin, cycloid scales.

Body slender and tapering, covered with large, weak, imbricate, cycloid scales. Lateral line commencing on shoulder and running close to and parallel to curve of back and terminating just behind soft dorsal fin; its scales bear tubes and each has its free margin notched. About four rows of scales between lateral line and dorsal fins. Scapula exposed, with radiating ridges.

Dorsal spines weak, the spinous fin fitting into a groove. Soft dorsal and anal with their anterior rays longest, forming lobes. Pectorals very long, with the margins rounded. Ventrals nearly as long as head, fitting into a deep groove on the belly which terminates at the vent just before the anal fin. Caudal very strongly forked, its lobes longer than head. Caudal peduncle much longer than deep.

General colour, in spirit, brownish on back, silvery on belly and sides of head and body. About five large irregular dark brown blotches below the lateral line, with two or three rows of large dark spots below and between them on the flanks. Two similar dark spots at base of caudal. These markings contrast strongly with the silvery ground colour and are almost symmetrical on either side. Caudal lobes dark brown proximally, whitish distally. Cheeks and opercles silvery. A dark brown blotch on each side of the end of the maxillary and another on each interoperculum. The line of demarcation between the dark brown dorsal colour and the silvery lateral and ventral colour is strongly differentiated on the preorbital by an oblique boundary, but on the body the brownish dorsal colour crosses the lateral line and merges into the dark brown blotches. First dorsal blackish; second dorsal and anal whitish, with several dark blotches intruding from the pattern on the body. Axilla and median rays of pectorals blackish. Ventrals black, with a row of interradiat white blotches on the distal half.

Described from the holotype, a specimen 5½ inches in total length, from Shellharbour, New South Wales. Australian Museum registered No. IA., 1928.

Nomeus dyscritus was called *Nomeus albula* (Meuschen) in the Australian Check-List (McCulloch, Austr. Mus. Mem., v., 1929, 123), an extralimital species usually called *Nomeus gronovii* (Gmelin) by authors, but that species is American and doubtfully conspecific with the new eastern Australian species named above. For notes on the habits of *Nomeus dyscritus*, see Waite, Rec. Austr. Mus., iv., 1901, 39-41.

Family POMATOMIDAE.

Genus POMATOMUS Lacépède, 1803.

POMATOMUS PEDICA, new species.

New name for *Temnodon saltator* McCoy (Prodr. Zool. Vict., ii., dec. xix., July, 1889, 301, pl. clxxxiii.) which is not *Gasterosteus saltatrix* Linné (Syst. Nat., ed. 12, 1766, 491. Ex Catesby), the type of which, from Carolina, has been remarked upon by Günther (Proc. Linn. Soc. Lond., 1899, 29 and 32). The typical Victorian form of *Pomatomus pedica* has ctenoid scales, seven or eight dorsal spines, and a row of small conical teeth inside the outer row of large ones in the upper jaw. Dr. David Starr Jordan examined specimens in Melbourne, which he stated, in a letter to McCulloch, were deeper in body than the American fish and not so blue.

Temnodon tubulus Saville-Kent (Great Barrier Reef, 1893, 369. *Nomen nudum*) is hereby designated a synonym of *Pomatomus pedica*.

Family SERIOLIDAE.

Genus NAUCRATES Rafinesque, 1810.

NAUCRATES ANGELI, new species.

A new name is required for the Pilot Fish of New South Wales as the young forms figured by McCulloch (Rec. Austr. Mus., xv., 1926, 34) differ markedly from Atlantic juveniles of *Naucrates ductor*, recently figured by Roule & Angel (Res. Camp. Sci. Monaco, fasc. lxxix., 1930, 86, pl. v., figs. 111-114). The holotype of my new species is the larger specimen figured by McCulloch from Maroubra, New South Wales, and the specific name is given in honour of M. Fernand Angel, whose delineations of the young fishes taken by the late Prince of Monaco's expeditions are superb examples of ichthyological draughtsmanship.

REGIFICOLA, new genus.

Orthotype, *Seriola grandis* Castelnau (Proc. Zool. Acclim. Soc. Vict., i., July 15, 1872, 115. Melbourne Market) = *Regificola grandis*.

Teeth in broad villiform bands on jaws, vomer, and palatines. Dorsal and anal lobes falcate, not produced. Fin-formula generally D.vii, i/34; A.ii, i/21. The more elongate body of the type-species shows immediately that it cannot be congeneric with *Caranx dumerili* Risso (Ichth. Nice, 1810, 175. Mediterranean. Figured by Cuv. & Val., pl. cclviii), the logotype of *Seriola* Cuvier, selected by Jarocki (*vide* Sherborn, Index Anim.). The typical form of *Regificola grandis* has been figured by McCoy (Prodr. Zool. Vict., ii., dec. xviii., May, 1889, 263, pl. clxxii).

Family CARANGIDAE.

USACARANX, new genus.

USACARANX NOBILIS (Macleay).

The New South Wales Trevally which has been called *Caranx georgianus* Cuvier & Valenciennes (Hist. Nat. Poiss., ix., March, 1833, 85. King George's Sound, W. Australia) by authors is not that species, but must apparently be known as *Usacaranx nobilis* Macleay (Proc. Linn. Soc. N.S. Wales, v., 4, May 20, 1881, 532, as *Caranx*. Port Jackson. Type in Macleay Museum, University of Sydney), the genotype of my new genus. Messrs. Troughton, Grant, and Wright collected a typical specimen of *Usacaranx georgianus* at Albany, King George's Sound, in November, 1921. This specimen has depth (68) nearly 3.2 in length to end of middle caudal rays (217); head (62) 3.3 in same; about 47 scutes; upper profile of head evenly

rounded. Another Western Australian specimen has been figured by McCulloch (Biol. Res. Endeavour, iii., 1915, 126, pl. xx), but he confused eastern and western Australian species in his description. A fine specimen collected by Mr. J. H. Wright, at Sans Souci, Botany Bay, New South Wales, in February, 1916, has depth (115) nearly 2.8 in length (320); head (96) 3.3 in same; more than 50 scutes, the anterior of which ascend the curved portion of the lateral line more than in W. Australian specimens. The snout is slightly concave before the eyes, but in a second Botany Bay specimen, caught at the same time, this concavity is much more pronounced, and the upper part of the head is gibbous. This form has been called *Caranx nobilis* by Macleay, and his name is therefore available for the New South Wales species confused with *C. georgianus*. Specimens from Lord Howe Island appear to be conspecific with the Sydney ones.

USACARANX GEORGIANUS WRIGHTI, new subspecies.

Specimens from South Australia, identified in the Australian Museum as *Caranx georgianus*, have depth (42) 2.9 in length (124); head (37) 3.3 in same; less than 40 scutes on straight portion of lateral line, the anterior portion of which is more strongly curved than it is in typical *Usacaranx georgianus*; upper profile of head oblique, gently curved.

Holotype (Austr. Mus., registered No. I.10336) from 40 miles west of Kingston, South Australia, 30 faths.; "Endeavour," August, 1909.

Mr. J. H. Wright, after whom the new subspecies is named, has presented many interesting specimens of Botany Bay fishes to the Australian Museum and drew the attention of the late A. R. McCulloch and myself to the curious development of the head in some of the New South Wales specimens of *Usacaranx nobilis*.

Family SCIAENIDAE.

ZELUCO, new genus.

Orthotype, *Otolithus atelodus* Günther (Ann. Mag. Nat. Hist. (3), xx., July 1, 1867, 60. Australia. Type in Brit. Museum) = *Zeluco atelodus*.

Precaudal vertebrae more numerous than the caudal ones. No true canine teeth in either jaw. Caudal fin emarginate.

The type-species of this genus has been admirably reviewed by Ogilby (Mem. Qld. Mus., vi., 1918, 67).

Family MULLIDAE.

BARBUPENEUS, new genus.

Orthotype, *Upeneus signatus* Günther (Ann. Mag. Nat. Hist. (3), xx., July 1, 1867, 59. Port Jackson, New South Wales. Type in British Museum) = *Barbupeneus signatus*.

Maxillary not quite reaching to below eye. Vomer and palatines toothless. A single row of teeth in jaws. Scales extending along top of head to level of nostrils.

Near *Hogbinia* Whitley (Proc. Linn. Soc. N.S. Wales, liv., 1929, 92. Orthotype, *Upeneus filamentosus* Macleay), but head not so elongate and snout shorter.

CAPRUPENEUS, new genus.

Orthotype, *Pseudupeneus jeffi* Ogilby (Proc. Roy. Soc. Qld., xxi., August, 1908, 19. Brisbane R., Queensland) = *Caprupeneus jeffi*.

Maxillary almost reaching vertical of anterior orbital margin. Teeth on jaws, vomer, and palatines. Head scaly in advance of nostrils. Dark oblique bars on caudal fin.

Near *Upeneoides* Bleeker (Verh. Bat. Gen., xxii., 1849, Percoid., 5, 6, 26, and 63. Logotype, *Mullus vittatus* (Forskal) Bonnaterre), but has head larger in proportion to the much deeper body.

I may record here that Bloch & Schneider (Syst. Ichth., 1801, 78) described *Mullus surmuletus* var. *lineatus* from New Holland, evidently collected by Dr. Latham at Port Jackson or Botany Bay, New South Wales. They also called this species *Mullus latamii* on plate xviii. of their work, and these two names, hitherto overlooked, apply to the Sydney species which I (Rec. Austr. Mus., xvii., 1929, 124, pl. xxxi., fig. 2) tentatively regarded as *Upeneichthys porosus* (Cuv. & Val.) from New Zealand. The Blue-Striped Goatfish of New South Wales may now be known as *Upeneichthys lineatus* (Bloch & Schneider).

Family SPARIDAE.

ROUGHLEYIA, new genus.

Orthotype, *Chrysophrys australis* Günther (Cat. Fish. Brit. Mus., i., 1859, 494. Type-locality: Port Jackson, New South Wales, by present designation) = *Roughleyia australis*.

Two of the commonest and best known species of fishes in New South Wales present taxonomic difficulties when their correct scientific names are sought. The first is the Black Bream, called *Sparus australis* by authors, and the second is the Snapper, generally known as *Pagrosomus auratus*. Günther described *Chrysophrys australis* from diverse Australian localities, so, to afford a foundation for future studies, I designate Port Jackson as type-locality so as to preserve the specific name for our form. This species is not, however, a *Chrysophrys*, as the authors of that generic name, Quoy & Gaimard (Voy. Uranie & Physicienne, Zool., 1824, 299. *Ex* Cuvier MS. Haplotype *C. unicolor* Quoy & Gaimard) describe it as being rosy ("d'un rose tendre") in colour, whereas the Black Bream is neither pink nor red. Most modern authors have placed Günther's species in the genus *Sparus* Linné (Syst. Nat., ed. 10, 1758, 277; ed. 12, 1766, 467. *Ex* Artedi). There are twenty-two "foundation members" of this genus, none of which is tautonymic, so that the question of first type-designation arises. The first selection of a logotype for *Sparus* appears to be that of Jordan & Gilbert (Bull. U.S. Nat. Mus., iii., 16, 1882, 555) who chose the first species, *Sparus auratus* [sic] Linné. Lesson (Dict. class. d'Hist. Nat., xv., 1829, 522) made *Sparus aurata* Linné the type of the "sous-genre Daurade" of Cuvier [1816, vernac.] = *Chryseis* Schinz (Das Thierreich (Cuvier), 1822, 438) so that *Chryseis*, a genus which has been generally overlooked, becomes an absolute synonym of *Sparus*. Other synonyms are *Aurata* Cloquet (Dict. Sci. Nat., xii., 1818, 546. Orthotype, *Sparus aurata* Linné. *Aurata* Oken, Isis., 1817, 1182a is a *nomen nudum*; teste T. Iredale), *Dorada* Jarocki (Zoologia, iv., 1822, 200. Tautotype, *Sparus aurata* Gmelin [fide Sherborn] and ? *Daurada* Stark, 1828), and *Eudynamis* Gistel (Nat. Thier., 1848, xiii. Haplotype, *Chrysophrys aurata* ibid., 108. Not *Eudynamis* Vigors & Horsfield, 1826—Aves), whereas *Chrysophrys* Quoy & Gaimard, 1824 (not *Chrysophris* Cuvier, 1829) remains distinct.

Chrysophrys australis Günther differs from *Sparus aurata* Linné in having less dorsal and anal rays, much fewer scales on lateral line (less than 50 instead of more than 70) and larger scales on body generally. Thus the Australian Black Bream requires a new generic name, and I have much pleasure in naming it *Roughleyia*, after my friend Mr. T. C. Roughley, in whose book, "Fishes of Australia and Their Technology," the species under discussion will be found excellently described and illustrated.

I have noted above that the generic name *Chrysophrys* applies better to the Snapper than to the Bream (*Roughleyia*) and will now discuss the taxonomy of the eastern Australian Snapper. I have not examined Western Australian or New Zealand specimens, but strongly suspect that our New South Wales form is specifically distinct from the snappers of those regions. The typical New Zealand form is *Chrysophrys auratus* (Bloch & Schneider) and the Western Australian species is *Chrysophrys unicolor* Quoy & Gaimard. Bloch & Schneider derived their specific name from *Sciaena aurata* Forster MS., but this must not be confused with the distinct species later described by Lichtenstein (Doublet. Z.M. Berlin, 1823, 116) from Brazil under the same name. Furthermore, Bloch & Schneider's name in its present combination invalidates *Chrysophris aurata* Cuvier (Règne Anim., ed. 2, ii., 1829, 182) which must be known as *Sparus aurata* Linné.

The first name which may be applied to the New South Wales Snapper appears to be *Pagrus guttulatus* Cuvier & Valenciennes (Hist. Nat. Poiss., vi., 1830, 160) and, so as to enable that name to be used for our species, I hereby designate Jervis Bay, New South Wales, the type-locality of the species, and our Snapper will thus be known as *Chrysophrys guttulatus* (Cuv. & Val.).

The Tarwhine of New South Wales, another Sparoid, has usually been called *Sparus sarba* Forskal (Descr. Anim., 1775, xi. & 31), but seems to be distinct from that Red Sea species, the authorship of which should be credited to Gmelin, as Forskal's work is non-binomial. Our form has been well characterised and figured by Stead (Ed. Fish. N.S. Wales, 1908, 78, pl. xlvii.), and may be known as *ROUGHLEYIA TARWHINE*, new species.

Family SCORPIDAE.

Genus ATYPICHTHYS Günther, 1862.

ATYPICHTHYS MADO, new species.

This is the Peronian representative of *Atypus strigatus* Günther (Cat. Fish. Brit. Mus., ii., 1860, 64 & 518. Raoul Island, Kermadec Group; Swan River, W. Australia; Holdfast Bay, S. Australia; Erromanga, New Hebrides) which has been well figured by Steindachner (Sitzb. Akad. Wiss. Wien., liii., 1866, 435, pl. iv., fig. 2).

The smaller scales of *Atypichthys mado* distinguish it from Günther's species, the description of which appears to be a composite one, based on specimens, probably not conspecific, from diverse localities. To serve as a basis for future research, I designate Raoul Island the type-locality of *Atypus strigatus* Günther.

The holotype of *Atypichthys mado* is a specimen a little over five inches long, in the Australian Museum (No. I.4334), from Manly, New South Wales.

Family KYPHOSIDAE.

SEGUTILUM, new genus.

Orthotype, *Pimelepterus sydneyanus* Günther (Ann. Mag. Nat. Hist. (5), xviii., November 1, 1886, 368. Port Jackson, N.S. Wales. Type in British Museum) = *Segutilum sydneyanum*.

Profile of head evenly sloping or rounded, without gibbosities. Body deep, compressed. Ten or eleven dorsal spines. Scales extending over fins, with the exception of ventrals and spinous dorsal and anal. Caudal excavate, but not strongly forked.

Differs from *Pimelepterus* Lacépède (Hist. Nat. Poiss., iv., 1802, 429. Haplotype, *P. bosquii* Lacépède) in having fewer dorsal and anal rays and

shorter ventrals and from *Kyphosus* Lacépède (Hist. Nat. Poiss., iii., 1802, 114. Haplotype, *K. digibbus* Lacépède) in lacking the gibbous profile and in having fewer dorsal spines.

SEGUTILUM KLUNZINGERI, new species.

Pimelepterus indicus Klunzinger, Sitzb. Akad. Wiss. Wien., lxxx., 1, 1879, 357, pl. vii.

Klunzinger's species is not *P. indicus* Cuvier & Valenciennes (Hist. Nat. Poiss., vii., 1831, 270. Ex Kuhl & van Hasselt MS. No loc.) as has been noted by McCulloch (Rec. Austr. Mus., xiii., 1920, 56) who has regarded Klunzinger's record as referable to *Kyphosus sydneyanus*, but it is unlikely that this restricted New South Wales species recurs in Western Australia. The type of this new species is the specimen figured on Klunzinger's plate by Konopicky, and the type-locality is King George's Sound.

LEPTOKYPHOSUS, new subgenus of SEGUTILUM.

Orthotype, *Kyphosus gibsoni* Ogilby (Mem. Qld. Mus., i., 1912, 50. Moreton Bay, Queensland. Type in Queensland Museum) = *Segutilum* (*Leptokyphosus*) *gibsoni*.

Form more slender than in *Segutilum*, and soft dorsal fin longer.

Ogilby's type was redescribed and figured by McCulloch (Rec. Austr. Mus., xiii., 1920, 59, pl. xii., fig. 3).

The species from northern Australia called *Kyphosus cinerascens* by Australian authors would be better known as *Opisthistius squamosus* (Alleyn & Macleay).

Family GIRELLIDAE.

GIRELLIPISCIS, new genus.

Orthotype, *Girella elevata* Macleay (Proc. Linn. Soc. N.S. Wales, v., 3, February, 1881, 408. Port Jackson) = *Girellipiscis elevatus*.

Outer teeth of jaws in single rows. Nostrils fimbriate. Thirteen dorsal spines.

Differs in these characters from *Girella* Gray (Illustr. Ind. Zool., ii., February, 1835, pl. xcvi.; *vide* Sherborn, Ind. Anim.) as described by Jordan & Thompson (Proc. U.S. Nat. Mus., xli., 1912, 589). According to these authors the typical *Girella punctata* Gray has 15 dorsal spines and 50 or more transverse series of scales. The Australian Blackfish, which has been admirably described and figured by McCulloch (Rec. Austr. Mus., xiii., 1920, 62, pl. xiv., fig. 1), has less than 50 scales in lateral line and may be called *Girella* (*Incisidens*) *tricuspidata* from Western Australia and *Girella* (*Incisidens*) *triglyphus* from eastern Australia, the subgeneric name having been applied to a female of the latter species by Gill (Proc. Acad. Nat. Sci. Philad., xiv., 1862, 244. Haplotype, *Crenidens simplex* Richardson).

Girella zonata Günther may not be Australian and seems to approach *Girella mezina* Jordan & Starks (Proc. U.S. Nat. Mus., xxxii., 1907, 496, fig. 3) from the Riu Kiu Islands.

I have not seen the original descriptions of *Girella castelnaui* Thomiot, *Doidyrodon australis* Thomiot, or *Tilodon australis* Thomiot, although abstracts of the last two species have been given by Fowler & Bean (Bull. U.S. Nat. Mus., 100, viii., 1929, 9-11) and show that they are probably not members of the family Girellidae; furthermore, the generic name *Doidyrodon* is apparently preoccupied.

IREDALELLA, new genus.

Orthotype, *Girella cyanea* Macleay (Proc. Linn. Soc. N.S. Wales, v., 3, February, 1881, 409. No loc.) = *Iredalella cyanea*.

Outer teeth of jaws in single rows. Nostrils scarcely fimbriate. More than thirteen dorsal spines. Ground-colour blue.

Named after Mr. Tom Iredale, who has collected an allied species of Bluefish in the Kermadec Islands.

Family CHAETODONTIDAE.

Genus VINCULUM McCulloch, 1914.

VINCULUM KERSHAWI, new species.

The Victorian specimen figured by McCulloch (Biol. Res. Endeavour, ii., 1914, 110, pl. xxii.) as *Vinculum serfasciatum* (Richardson) is not that Western Australian species. Richardson (Ann. Mag. Nat. Hist., x., September 1, 1842, 26) described *Chaetodon serfasciatus* as having the curve of the back springing boldly from the middle of the orbit, eye touching profile, serrations scarcely perceptible on lower limb of preoperculum, and 16 or 17 anal rays. The form figured by McCulloch has the curve of the back originating over posterior half of orbit, eye not reaching profile, lower limb of preoperculum serrated, and 18 anal rays. The disposition of the transverse bands does not quite correspond with Richardson's description of the colour-markings.

In view of these discrepancies, I name the Victorian species in honour of Mr. J. A. Kershaw, of the National Museum, Melbourne, the author of numerous articles on the fishes of Victoria.

Family CHIRONEMIDAE.

Genus CHIRONEMUS Cuv. & Val., 1829.

CHIRONEMUS ABORIGINALIS, new species.

Ogilby (Edible Fish. N.S. Wales, 1893, 54, pl. xvii.) and Roughley (Fish. Austr., 1916, 121, pl. xxxix.) have given good descriptions and figures of the New South Wales species generally called *Chironemus marmoratus* Günther (Cat. Fish. Brit. Mus., ii., 1860, 76). That species was described from Swan River, Western Australia (type-locality) and "Darnley Island," but the latter locality is probably incorrect. The New South Wales form may be named *C. aboriginalis*, as it has the sixth dorsal spine longest, generally 2.25 to 2.5 in head, and the height of body more than length of head.

Family ISTIOPHORIDAE.

ISTIOMPAX AUSTRALIS, new genus and species.

The holotype of the new species, which is also the orthotype of the genus, is the specimen figured by Ramsay (Proc. Linn. Soc. N.S. Wales, v., February, 1881, 295 & 522, pl. viii. Off Wollongong, New South Wales) as *Histiophorus gladius*. This specimen is mounted in the Australian Museum. I have also examined a fresh specimen of this novelty from Manly, near Sydney, and have made detailed notes and measurements with a view to future publication. Australasian authors have apparently also misidentified this species as *Tetrapturus indicus* and *Makaira mazara*.

Family TEUTHIDAE.

BUROBULLA, new genus.

Orthotype, *Xesurus maculatus* Ogilby (Proc. Zool. Soc. Lond., October 1, 1887, 395. Port Jackson, New South Wales) = *Burobulla maculata*.

Differs from *Xesurus* Jordan & Evermann (Rept. U.S. Comm. Fish., 1895, Append., v., December 28, 1896, 421. Orthotype, *Prionurus punctatus* Gill) in having D.x/24 and the body light-spotted.

Family BOTHIDAE.

ISTIORHOMBUS, new genus.

Orthotype, *Pseudorhombus spinosus* McCulloch (Biol. Res. Endeavour, ii., July 3, 1914, 129, pl. xxv. Houtman's Abrolhos (type) and between Cape Naturaliste and Geraldton, W. Australia. Type on deposit in Australian Museum) = *Istiorhombus spinosus*.

Profile not notched before the eye. Gill-rakers palmate, as long as broad. Scales cycloid on both sides of the body. Dorsal originating before nostrils on blind side of body. A strong preanal spine.

Pseudorhombus spinosus Norman (Biol. Res. Endeavour, v., June 15, 1926, 224. Queensland specimens only) differs in details of squamation from the true Western Australian species of McCulloch and may be named

ISTIORHOMBUS SPINOSUS NORMANI, new subspecies.

Whilst on the subject of *Pseudorhombus*, I take this opportunity of inserting a figure (plate xxv) of the holotype of *Pseudorhombus anomalus* Ogilby (Mem. Qld. Mus., i., November 27, 1912, 48. Moreton Bay, Queensland), which has been very kindly lent to me by the Director of the Queensland Museum. Ogilby's description is very accurate, but I find from microscopical examination that the fin-formula is D.68 and A.54. This species is apparently a true *Pseudorhombus*.

I also take this opportunity to propose CHOPINOPSETTA as a new name for the extra-Australian genus *Eucitharus* Gill (Proc. U.S. Nat. Mus., xi., 1889, 600) preoccupied by *Eucithara* Fischer, 1883, a genus of mollusca.

Family SYNAPTURIDAE.

PARADICULA, new genus.

Orthotype, *Synaptura setifer* Paradise and Whitley (Mem. Qld. Mus., ix., 1, April 28, 1927, 91 & 101, fig. 3. Port Darwin, North Australia) = *Paradricula setifer*.

Whitleyina Fowler & Bean (Bull. U.S. Nat. Mus., 100, x., publ. early 1930, vii. & 163) is a synonym of *Whitleyia* of the same authors (*loc. cit.*, 2 & 148) which has line-priority. Unfortunately, this genus of Chandid fishes preoccupies *Whitleyia* Chabanaud (Bull. Inst. Oceanogr., No. 555, July 5, 1930, 2, 8 & 16) introduced a little later for a genus of soles. Whilst thanking these authors for the dual honour thus conferred, the writer feels it is necessary to take this early opportunity of renaming Chabanaud's genus, and accordingly proposes the new generic name *Paradricula*, in honour of his late friend and collaborator, W. E. J. Paradise, with *Synaptura setifer* as orthotype.

Some Bleekerian species of Soles, none of them yet known authentically from Australia, require new generic names. *Achirus poropterus* Bleeker, 1851, has between sixty and seventy dorsal rays and between forty and fifty anal rays, and has fewer scales than *Pardachirus*. This species may be made the type of the new genus NORMANETTA, named after Mr. J. R. Norman. *Synaptura panoides* Bleeker, 1851, may be called CHABANAUDETTA a new name in honour of M. Paul Chabanaud, which will replace *Anisocheirus* Günther, twice preoccupied. For *Dexillus* Chabanaud, 1930, preoccupied by *Dexilla* Westwood, 1840, a genus of Diptera, I propose the new generic name DEXILLICHTHYS, with *Synaptura macrolepis* Bleeker, 1858, as genotype.

Family CORIDAE.

CTENOCORISSA, new genus.

Orthotype, *Labrus pictus* Bloch & Schneider (Syst. Ichth., 1801, 251, pl. lv. "Habitat in America australi ad Novam Hollandiam." Type-locality, Botany Bay, New South Wales, by present designation).

The characteristic comb-shaped band on each side is sufficient to distinguish this species generically from all other species allied to *Coris* Lacépède known to the writer. The "Banana Fish" or "Comb Fish" is commoner at Lord Howe Island than around Sydney, but the type, collected by Dr. Latham, evidently came from the Botany Bay district, where I have collected it also. The species may now be known as *Ctenocorissa picta*.

Family CALLIONYMIDAE.

REPOMUCENUS, new genus.

Orthotype, *Callionymus calcaratus* Macleay (Proc. Linn. Soc. N.S. Wales, v., 4, May 20, 1881, 628. Port Jackson, New South Wales) = *Repomucenus calcaratus*.

Preopercular spine with its distal extremity curved upward and with several recurved hooks on its upper surface, and with an antrorse spine below. First dorsal spine not longer than second. Dorsal rays mostly simple. Inner ventral ray joined to base of pectoral by a broad membrane which covers the bases of the lower pectoral rays.

FOETOREPUS, new genus.

Orthotype, *Callionymus calauropomus* Richardson (Zool. Voy. Erebus & Terror, Fish., 1844, 10, pl. vii., figs. 4-5. Western Australia).

Similar to *Repomucenus*, but has no antrorse barb below preopercular spine and the dorsal rays mostly branched; preopercular spine with two distal hooks. *Foetorepus calauropomus* has shorter snout and narrower interorbital than *F. achates* (De Vis) from Queensland, whilst the Victorian *F. papilio* (Günther) has 6 anal rays instead of 7 or 8.

Family BLENNIIDAE.

Subfamily CLININAE.

Genus PETRAITES Ogilby, 1885.

PETRAITES SELLULARIUS, new species.

New name for *Petraites roseus* McCulloch (Rec. Austr. Mus., vii., 1908, 40, pl. x., fig. 4), from New South Wales (type) and Lord Howe Island, which differs from *Cristiceps roseus* as described by Günther (Cat. Fish. Brit. Mus., iii., 1861, 274), from Freycinet's Harbour (type) and "New Guinea and Islands," in having the height $4\frac{1}{2}$ in total length and the eye longer than the snout. Probably direct comparison of specimens would reveal further differences. This species is common around Sydney, the type-locality.

Subfamily BLENNIINAE.

Genus PICTIBLENNIUS Whitley, 1930.

PICTIBLENNIUS IREDALEI, new species.

New name for *Blennius castaneus* Macleay (Proc. Linn. Soc. N.S. Wales, vi., 1, July, 1881, 5. Port Jackson) preoccupied by *Blennius castaneus* Castelnau (Mem. Poiss. Afr. Austr., 1861, 50, *fide* Barnard, Ann. S. Afr. Mus., xxi., 1927, 837) from South Africa. This New South Wales species is allied to *Pictiblenius tasmanianus* (Richardson) and *P. intermedius* (Ogilby), the foundation members of my genus (Mem. Qld. Mus., x., 1930, 19).

Named after Mr. Tom Iredale, conchologist of the Australian Museum, who collected a series of this species in marine growths on submerged timber at Clark Island, Port Jackson, in April, 1928; it was not found at numerous other stations visited in Port Jackson at the same time.

Subfamily TRIPTERYGIONTIDAE.

This subfamily includes Blennies with large scales and three dorsal fins. The genera *Lepidoblennius* Steindachner, 1867, and *Helcogramma* McCulloch & Waite, 1918, may be tentatively included, but these forms have a complete lateral line.

VAUCLUSELLA, new genus.

Orthotype, *Tripterygium annulatum* Ramsay & Ogilby (Proc. Linn. Soc. N.S. Wales (2), ii., 4, March 21, 1888, 1021. Vacluse, Port Jackson. Type in Austr. Mus.) = *Vauchlusella annulata*.

Snout pointed. Head naked; only one or two scales before first dorsal spine. Gill-membranes united across isthmus. Gill-openings very broad. Bands of minute pointed teeth in jaws. No canines.

Body elongate, tapering, covered with large ctenoid scales, in less than 40 transverse series. The tube-bearing anterior portion of the lateral line does not reach level of third dorsal fin and is separated by one row of scales from the posterior portion, which consists of notched scales. Three dorsal fins, close together; 3 + 12 spines. No produced spines or rays. Upper pectoral rays simple, median bifurcate. Lower pectoral rays and ventral and anal rays finger-like. Caudal truncate or gently rounded, its rays branched. Coloration variable, but without well-marked transverse bands.

Differs from *Tripterygion* Risso (Hist. Nat. Eur. Mérid., iii., 1826, 241. Haplotype, *T. nasus* Risso) in having the dorsal fins closer together and without produced rays. *Enneapterygius* Rüppell (Neue Wirbelth. Abyssin. Fische, 1835, 2. Orthotype, *E. pusillus* Rüppell) has less than thirty transverse series of scales and higher dorsal fins. *Notoclinops* Whitley (Mem. Qld. Mus., x., 1, August 28, 1930, 20. Orthotype, *Tripterygion segmentatum* McCulloch & Phillipps) is nearer *Vauchlusella*, but has well marked transverse bands on body. Waite (Rec. Canterb. Mus., ii., 1, December, 1913, 1-16, pls. i.-v.) has given an excellent revision of the New Zealand relatives of *Tripterygion*, but none of his species seems to be referable to that genus, and it seems likely that several new generic names will have to be given to the New Zealand species.

VERCONNECTES, new genus.

This genus differs from those mentioned above in the form of the head, backward extension of the mouth, and the very long anterior portion of the lateral line. *Trianectes* McCulloch & Waite (Rec. S. Austr. Mus., i., 1, May 24, 1918, 53. Orthotype, *T. bucephalus* McCulloch & Waite) may be regarded as preoccupied by *Trinectes* Rafinesque (The Atlantic Journal and Friend of Knowledge, i., 1832, reproduced by Chabanaud, Bull. Mus. Hist. Nat. Paris (2), ii., 3, 1930, 260. Ex Myers MS.) of the same etymological derivation; I therefore rename it *Verconnectes*, and the type-species may now be known as *Verconnectes bucephalus*.

Named after Sir Joseph Verco, the veteran South Australian conchologist, who has conducted extensive dredging operations in our southern waters.

Family GOBIESOCIDAE.

PARVICREPIS, new genus.

Orthotype, *Diplocrepis parvipinnis* Waite (Rec. Austr. Mus., vi., 3, June 19, 1906, 202, pl. xxxvi., fig. 3. New South Wales; i.e., Sydney district) = *Parvicrepis parvipinnis*.

Günther (Cat. Fish. Brit. Mus., iii., 1861, 490 & 506) proposed the genus *Diplocrepis* for *Lepadogaster puniceus* Richardson (Zool. Voy. Erebus & Terror, Fish., 1846, 71, pl. xliii., figs. 1-7. New Zealand). On comparing *Diplocrepis parvipinnis* Waite with Richardson's figure, I find the differences are so striking that it is evident that the Australian species hitherto known as *Diplocrepis* are not congeneric. *Parvicrepis* may be thus defined:—

Head strongly depressed. Gill-membranes united across isthmus. Rows of small pointed teeth in jaws, no incisors. Upper jaw much longer than lower. Body more elongate than in *Diplocrepis* and with longer caudal peduncle. Ventral sucker not nearly stretching across ventral surface of body; anterior margin of the posterior portion of the sucker free.

VOLGIOLUS, new subgenus of PARVICREPIS.

Orthotype, *Diplocrepis costatus* Ogilby (Proc. Linn. Soc. N.S. Wales, x., 2, July 31, 1885, 270. Port Jackson) = *Parvicrepis (Volgiolus) costatus*.

Dorsal and anal fins with an increased number of rays and much nearer the caudal fin than in typical *Parvicrepis*.

Family ELEOTRIDAE.

MEUSCHENULA, new genus.

Orthotype, *Agonostoma darwiniense* Macleay (Proc. Linn. Soc. N.S. Wales, ii., 4, June, 1878, 360, pl. ix., fig. 3. Port Darwin, North Australia) = *Meuschenula darwiniensis*.

Preopercular margins free and exposed. No supraciliary scales. More than thirty scales between pectoral axil and hypural joint. Light spots on soft dorsal and caudal fins.

A co-type, which is hereby designated the lectotype, of Macleay's species, preserved in the Australian Museum, has been described in detail by McCulloch & Ogilby (Rec. Austr. Mus., xii., 10, July 14, 1919, 277).

Family PERIOPHTHALMIDAE.

Genus EUCHORISTOPUS Gill, 1863.

The genotype of *Periophthalmus* Bloch & Schneider (Syst. Ichth., 1801, 63) is *P. papilio*, figured on plate 14. This species has a high and expansive anterior dorsal fin and is quite unlike the Australian form hitherto regarded as congeneric. Gill (Proc. Acad. Nat. Sci. Philad., 1863, 271) proposed the name *Euchoristopus* for *Periophthalmus koelreuteri* (Pallas). He seems to have subtitled the definition of his new genus *Periophthalmus* instead of *Euchoristopus*, as he evidently intended, but, nevertheless, *Euchoristopus* is the more applicable name for the Australian form.

EUCHORISTOPUS KALOLO (Lesson).

Periophthalmus kalolo Lesson, Voy. Coquille, Zool., ii., 1, 1831, 146. Waigiou. *Periophthalmus argentilineatus* Cuvier & Valenciennes, Hist. Nat. Poiss., xii., 1837, 191. Waigiou (Lesson & Garnot). *Id.* Harms, Zeit. Wiss. Zool., cxxxiii., 1929, 243 *et seq.*, pls. vi.-vii. & text-figs. 19 *et seq.* *Id.* Eggert, *ibid.*, 400 & 404, pls. viii.-ix.

Periophthalmus koelreuteri var. *argentilineatus* McCulloch & Ogilby, Rec. Austr. Mus., xii., 10, 1919, 194. Queensland specimens only; not figure.

I have collected this fish in several Queensland localities. It is common in mangrove swamps and has been commented upon by naturalists

since the time of Cook. *P. koelreuteri* (Pallas) is apparently an Indian or African relative, so I am using Lesson's name, which has priority over that of Cuvier & Valenciennes, for the Queensland species. Harms (*loc. cit., supra*) has demonstrated the existence of local varieties of "*Periophthalmus argentilineatus*," and it is probable that these deserve distinct varietal designations. It is not my intention to name them here, but I take this opportunity of separating the north-western Australian form, as follows.

EUCHORISTOPUS KALOLO REGIUS, new subspecies.

Periophthalmus koelreuteri var. *argentilineatus* McCulloch & Ogilby, Rec. Austr. Mus., xii., 10, July 14, 1919, 194, pl. xxxi., fig. 1. King Sound specimens only. Not *P. argentilineatus* Cuv. & Val.

Periophthalmus koelreuteri Rendahl, Medd. Zool. Mus. Kristiania, v., September 8, 1922, 165 & 191. Roebuck Bay and Daly River. Not *P. koelreuteri* (Pallas).

The holotype of this subspecies is the Australian Museum specimen figured by McCulloch & Ogilby from King Sound, north-western Australia. It differs from my Queensland specimens in having the first dorsal fin more emarginate and the caudal more evenly rounded.

Family GOBIIDAE.

Genus MUCOGOBIUS McCulloch, 1912.

MUCOGOBIUS GOBIOSOMA, new species.

South-western Australian specimens called *Callogobius hasseltii* var. *mucosus* by McCulloch & Ogilby (Rec. Austr. Mus., xii., 10, July 14, 1919, 217) differ in squamation and coloration from *Gobius mucosus* Günther (Proc. Zool. Soc. Lond., 1871 (May 2, 1872), 663, pl. lxxiii., fig. a) from Adelaide, South Australia and from *Gobius depressus* Ramsay & Ogilby (Proc. Linn. Soc. N.S. Wales (2), i., 1, May 25, 1886, 4 and Ogilby, Cat. Fish. N.S. Wales, published about August 25, 1886, 35) from Port Jackson, New South Wales, and may be renamed *Mucogobius gobiosoma*.

Family SCORPAENIDAE.

RUBORALGA, new genus.

Orthotype, *Scorpaena jacksoniensis* Steindachner (Sitzb. Akad. Wiss. Wien, liii., 1, 1866, 438, pl. iii., figs. 2-2a. Port Jackson, N.S.W.) = *Ruboralga jacksoniensis*.

Orbital crests and bony stay of cheek with several spines. Lower part of operculum naked. Palatine and vomerine teeth present. Twelve dorsal spines, none of them greatly produced, and all united by membrane for the greater part of their length. Second anal spine longer than third. General coloration mainly reddish.

Scorpaena Linné (Syst. Nat., ed. 10, 1758, 266; ed. 12, 1766, 452. Logotype, *S. porcus* selected by Jordan & Gilbert, Bull. U.S. Nat. Mus., iii., 16, 1882, 678) from the Mediterranean Sea seems to have a very different facies when Bloch's plate 181 of the typical species is compared with the Australian form.

With the new genus *Ruboralga* may be associated *Scorpaena ergastulorum* Richardson, *Scorpaena sumptuosa* Castelnau, and *Scorpaena belliosa* Castelnau from Australia and *Scorpaena cardinalis* Richardson from New Zealand.

Family PLATYCEPHALIDAE.

CACUMEN, new genus.

Orthotype, *Platycephalus speculator* Klunzinger (Arch. Naturg., xxxviii., 1, 1872, 28. Hobson's Bay, Victoria) = *Cacumen speculator*.

The large orbits and scaly interorbital and nape characteristic of the type-species of this genus are well shown in Klunzinger's figure (Sitzb. Akad. Wiss. Wien, lxxx., 1, 1879, pl. iv., fig. 1).

PLANIPRORA, new genus.

Orthotype, *Platycephalus fuscus* Cuvier & Valenciennes (Hist. Nat. Poiss., iv., November, 1829, 241. Port Jackson) = *Planiprora fusca*.

Head and body very broad and depressed. Interorbital sunken, broader than transverse diameter of eye. Scales small. Body dark, without conspicuous dark spots. Ventrals, caudal, and lower part of pectoral fins blackish with white borders.

LEVIPRORA, new genus.

Orthotype, *Platycephalus inops* Jenyns (Zool. Voy. Beagle, Fish., 1840, 33. King George's Sound, W. Australia) = *Leviprora inops*.

No exposed bony ridges on upper surface of cranium. Eye larger than interorbital.

TRUDIS, new genus.

Orthotype, *Platycephalus bassensis* Cuvier & Valenciennes (Hist. Nat. Poiss., iv., November, 1829, 247. Westernport, Victoria) = *Trudis bassensis*.

Lower preopercular spine considerably longer than upper. Pectorals small. Scales rather large. Interorbital about equal to transverse diameter of eye. No enlarged teeth in jaws.

LONGITRUDIS, new genus.

Orthotype, *Platycephalus longispinis* Macleay (Proc. Linn. Soc. N.S. Wales, ix., May 23, 1884, 170. Off Port Jackson) = *Longitrudis longispinis*.

Lower preopercular spine more than twice length of upper. Teeth small and of uniform size. Head less depressed and snout more acute than in *Planiprora* or *Trudis*.

General colour of type-species light brown, with reddish-brown spots, and a row of spaced whitish spots along each side of the dorsal surface.

Family TRIGLIDAE.

CURRUPISCIS, new genus.

Orthotype, *C. volucer*, new species.

Head not particularly rugose. Two spines over anterior margin of orbit. Interorbital space concave. Preorbital produced into three small spines on each side of snout. Bands of teeth on jaws and vomer, none on palatines. Gill-rakers slender, less than half as long as eye.

A row of about 23 spinigerous bucklers along each side of both dorsal fins. First dorsal spine very slightly rugose. Pectoral longer than head. No pungent anal spine.

Scales very small, in more than one hundred transverse rows. Lateral line unarmed. General coloration of body reddish.

This genus is apparently allied to *Chelidonichthys* Kaup (Arch. Naturg., 1873, 87. Logotype, *Trigla hirundo* Linné). I have not seen Kaup's paper, but am guided by Jordan's resume of it (Gen. Fish., iii., 1919, 369-370). *Trigla hirundo* Linné, the genotype, as described and figured by Day (Fish. Gt. Brit. Ireland, i., 1880, 59, pl. xxiv.) differs from the type-species of my new genus in having more rugose and spiny head, with the spines and ridges differently situated, a larger scapular spine, more dorsal bucklers, and quite different coloration.

Two genera of extra-Australian Gurnards may be renamed: *Bellator* Jordan & Evermann, 1895, preoccupied by *Bellatrix* Boie, 1831, a genus of birds, may be called VEXILLITRIGLA and another new genus, TRISCURRI-

CHTHYS, may replace *Merulinus* Jordan & Evermann, 1898, not *Merulina* Ehrenberg, 1834, a genus of coelenterates.

CURRUPISCIS VOLUCER, new species.

This is the New South Wales species identified as *Trigla kumu* by Steindachner (Sitzb. Akad. Wiss. Wien, liii., 1866, 20) and subsequent authors. It has been well described and figured by Ogilby (Ed. Fish. Crust. N.S. Wales, 1893, 109, pl. xxix.), Stead (Ed. Fish. N.S. Wales, 1908, 114, pl. lxxix.) and Roughley (Fish. Austr., 1916, 184, pl. lxiv.). It differs from the Neozelanic *Currupiscis kumu*, originally described as *Trigla kumu* by Lesson (Voy. Coquille, Poiss., 1826, 214, pl. xix. New Zealand) in having more whitish or blue spots and usually a smaller black ocellus on the pectoral fin. The supraorbital rims appear more elevated and spiny and the profile is more even in the Sydney species. *Trigla papilionacea* Cuvier & Valenciennes (Hist. Nat. Poiss., iv., November, 1829, 50. Ex Solander MS. New Zealand) is a synonym of *Currupiscis kumu*.

The holotype of *Currupiscis volucer* is a specimen in the Australian Museum (No. IA.4667) which I purchased at La Prouse, Botany Bay, New South Wales, on 2nd November, 1930.

As *Chelidonichthys kumu*, Jordan & Richardson (Proc. U.S. Nat. Mus., xxxiii., 1908, 656) have separated the Port Jackson *Currupiscis volucer* from the Japanese *C. spinosus* (McClelland).

Family ANTENNARIIDAE.

PHRYNELOX, new genus.

Orthotype, *Lophius striatus* Shaw & Nodder (Nat. Miscell., v., May 1, 1794, pl. clxxv. "Circa litora Australasiae" (Banks) = Botany Bay, New South Wales) = *Phrynelox striatus*.

Teeth on jaws, vomer, palatines, and pharynx. Direction of premaxillary almost vertical. Body elevated, compressed. Skin covered with prominent spines; no wart-like tubercles. Soft dorsal and anal distinct from caudal. Pectorals and ventrals small and rather slender. Three separate dorsal spines; the first free, slender, and with a trifid appendage at its extremity, the second and third much shorter, not higher than soft dorsal, thick, spiny, and each connected to back by membrane; the membrane of the third dorsal spine does not reach its tip. A smooth groove behind second dorsal spine. About eleven dorsal rays. Lateral line distinct.

The type-species has blackish lines or bars irregularly disposed on body, tending to form ocelli on belly, caudal, and end of anal fin.

Lophius pictus and *L. marmoratus* Shaw & Nodder, described with *L. striatus*, have been regarded as synonymous with *L. histrio* Linné, but the New South Wales form had better be regarded for the present as *Pterophrynoides histrio* var. *pictus* (Shaw & Nodder); for references see McCulloch (Austr. Mus. Mem., v., 1929, 406). *Lophius cocinsinensis* Shaw & Nodder (Nat. Miscell., xxiii., 1812, pl. 1012) is apparently a synonym of *Pterophrynoides histrio* (Linné).

Whilst on the subject of the species of "*Lophius*" described by Shaw and Nodder from Australia, I invite attention to a remarkable form which has been unwarrantably overlooked by subsequent authors. This is *Lophius monopterygius* Shaw & Nodder (Nat. Miscell., vi., February 1, 1795, pls. ccii. and cciii.), the drawings of which obviously represent the Sydney "Numbfish" which was later called *Hypnos subnigrum* by Duméril (Rev. Mag. Zool. (2), iv., 1852, 279, pl. xii.). As I do not regard *Hypnos* Duméril as preoccupied by *Hypna* Hübner, 1818, a genus of Lepidoptera, I consider the

correct name for our species is *Hypnos monopterygium* (Shaw & Nodder), a member of the family Narcobatidae.

Of the 1064 plates in Shaw & Nodder's work, 162 represent fishes, but the only Australian specimens illustrated appear to be *Chaetodon armatus* (pl. 57), *Squalus ocellatus* (161), *Raja rostrata* (173), *Lophius striatus* (175), *L. pictus* and *L. marmoratus* (176), *L. monopterygius* (202 and 203), *Ostracion meleagris* (253), *O. auritus* (338), *Trachichthys australis* (378), *Squalus tentaculatus* (630) and *S. appendiculatus* (727).

Family ALUTERIDAE.

BLANDOWSKIUS, new genus.

Orthotype, *Blandowskius bucephalus*, new species.

Depth, measured from origin of soft dorsal to that of anal, less than half standard length, and much more than length of head. Less than forty dorsal and anal rays. Ventral spine obsolete.

Named after Wilhelm von Blandowski, a German naturalist about whom little seems to be known. After taking part in the Schleswig-Holstein war, he was in Victoria in the fifties and sixties of last century. He led a small expedition from Melbourne to the Murray River and back in 1857-1858 and wrote a paper, which was later suppressed, on the fishes of the Murray River, which were collected, observed, and drawn by Gerard Krefft, who accompanied him, or by himself. See Austral Avian Record, v., 1927, 101.

BLANDOWSKIUS BUCEPHALUS, new species.

(Plate xxvi., fig. 1).
D.ii/36; A.36; P.14; C.12.

Head (21.5 mm.) 3.5 in length to root of caudal (76). Depth (32) 2.3 in same. Pectoral (6) equal to eye (6), nearly 3 in snout (17). Gill-opening (5) equal to interorbital (5). Dorsal spine (12.5) 1.7 in head. Base of dorsal (26) subequal to that of anal (25.5).

Body deep, compressed, the ventral profile lower than the dorsal. Two gibbosities before the eyes may be abnormal features. A pair of small nostrils on each side of the lower hump. Teeth acutely pointed, the lateral longest. Gill-opening below eye.

Soft dorsal and anal with their margins evenly rounded, the rays highest towards the anterior end. Rays simple, without perforated membranes. Dorsal spine above hinder half of eye, with four rows of barbs. Distance from origin of dorsal spine to that of soft dorsal fin equal to length of head. Pectorals small, rounded; the rays simple, compressed and thickened distally. Ventral spine obsolete; ventral flap bag-like; anus large. Caudal peduncle as long as deep. Caudal fin rounded.

Head and body covered with minute erect spinules forming a dense pile. Lateral line system feebly developed.

Colour, after long preservation in formalin, straw brown, with the dorsal, anal, and ventral fins hyaline. Caudal with three or four fuscous transverse bars and two rows of dark rusty brown spots near base. Head and body ornamented with irregular rows of similar dark rusty-brown spots, disposed as shown in the accompanying figure. Eye bluish.

Described and figured from the unique holotype, a specimen 96 mm. in total length, from off Wilson's Promontory, Victoria. Australian Museum registered number E. 1263.

Genus MONACANTHUS Schinz, 1822.

MONACANTHUS FILICAUDA Günther.

(Plate xxvi., fig. 2).

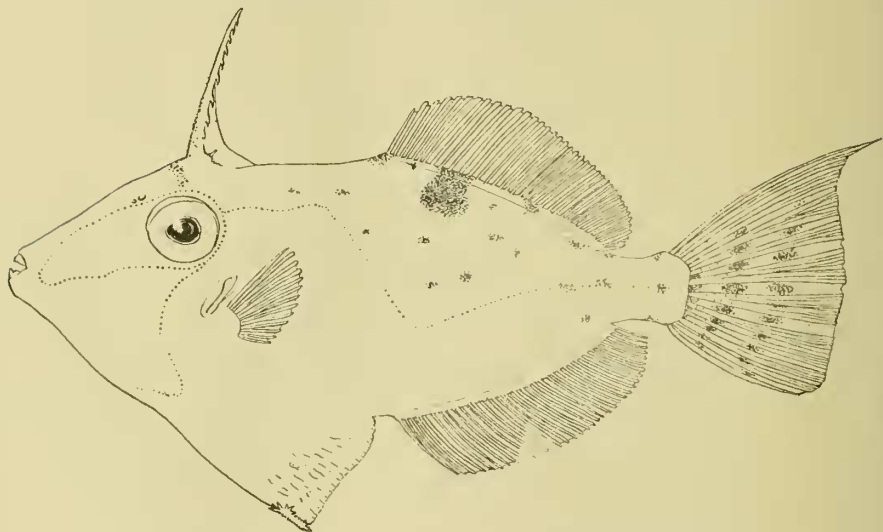
Monacanthus flicauda Günther, Voy. Challenger, Zool., i., 6, 1880, 50, pl. xxiii., fig. D. South of New Guinea; 28 fathoms. *Id.* Fowler, Mem. Bish. Mus., x., 1928, 456.

The larger of two specimens (No. E. 2897) trawled 11-14 miles off Pine Peak, Queensland, in 24-26 fathoms in August, 1910, is here figured. These agree with Günther's description and figure and have the following characters: D.ii/36; A.36; P.13; C.12. Pectoral rays divided; membranes of dorsal and anal fins perforated at bases. Ventral spine movable. Depth a little less than 2 in standard length.

This species ranges from south of New Guinea to the coast of Queensland in about 24 to 28 fathoms. The New South Wales species hitherto identified as *Monacanthus filicauda* may be separated as a distinct subspecies.

MONACANTHUS FILICAUDA NOTONECTIANUS, new subspecies.

Monacanthus filicauda Waite, Proc. Linn. Soc. N.S. Wales (2), ix., December, 1894, 224. Maroubra Beach, near Sydney, N.S. Wales. Specimens in Austr. Mus. *Id.* McCulloch, Austr. Zool., ii., 3, 1922, 124, not figure.



D.ii/37; A.37; P.13; C.12.

Depth at origin of dorsal and anal (30) 2.4 in length to root of caudal (73). Eye (8) 2.8, interorbital (6.5) 3.2, gill-opening (5) 4.6 in head (23). Snout (15) less than first dorsal spine (17).

General form elongate, compressed. Profile of snout convex before eye, but slightly excavate anteriorly. Head and body covered with very small, erect, simple, slightly curved spines, with radiating roots. Lateral line indistinct, but apparently following course shown in accompanying figure.

Dorsal spine long, with asperities tending to form barbs anteriorly and a row of spaced hook-like barbs on each side pointing outwards and downwards. Soft dorsal and anal high, rounded, and with the membranes perforated basally. Pectoral rays simple. Ventral spine movable, with pairs of spinules at its tip and pairs of antrorse barbs anteriorly. Ventral flap with spaced spinigerous ridges. Caudal obtusely truncate, with the first and second rays forming a produced point.

Colour, in spirit, yellowish brown, with some dark brown spots on sides and a large dark blotch below anterior portion of soft dorsal fin. Caudal with two oblique rows of black spots on membranes and a few dark marks near roots of rays.

Described and figured from the holotype, a specimen 73 mm. in length without the caudal fin, or nearly four inches in total length. Australian Museum registered number 1A.1815.

Localities.—Coogee Beach, near Sydney, N.S. Wales; washed ashore alive, 10th February, 1924, and collected by G. P. Whitley (holotype). Another from the same place found a few days later and a series collected by the late Thomas Whitelegge, at Maroubra, in January to March, 1894, and recorded by Waite. These show no important variation, and suggest that this subspecies is occasionally washed up on New South Wales beaches in summer, after having, perhaps, been brought southwards on the notonectian current.

The new subspecies differs from typical *Monacanthus filicauda* in having a more elongate body covered with smaller asperities. The back is less elevated, the pectoral rays are simple, and there are only two rows of spots on the caudal fin. Australian records of *Monacanthus sulcatus* Holland may perhaps be referable to *M. filicauda*.

In a popular article on this species (Sydney Mail, October 1, 1924, 45), I suggested for it the vernacular name Cottontail Leatherjacket.

Genus PARAMONACANTHUS Bleeker, 1866.

Paramonacanthus Bleeker, Neder. Tijdschr. Dierk., iii., 1866, 12. Orthotype, *Monacanthus curtorhynchus* Bleeker (fide Jordan, Gen. Fish., iii., 1919, 340). *Id.* Bleeker, Atlas Ichth., v., 1869, 99. Not *Paramonacanthus* Steindachner, 1867, preocc. — *Laputa* Whitley, 1930.

Ventral spine movable, not coalesced with pubic bone, and produced beyond ventral flap. Depth much less than half length, excluding caudal, but more than length of head. Dorsal and anal fins elevated anteriorly.

PARAMONACANTHUS OBLONGUS (Temminck & Schlegel).

(Plate xxvii., fig. 1).

Monacanthus oblongus Temminck & Schlegel, Faun. Japon., Poiss., 1850, 291, pl. cxxx., fig. 2. Japan. A type in British Museum. *Id.* Günther, Cat. Fish. Brit. Mus., viii., 1870, 241; Japanese record only.

Monacanthus broekii Bleeker, Acta Soc. Sci. Indo-Neerl., iii., 1853, Ichth. Japon., 35. Nagasaki, Japan.

Stephanolepis oblongus Jordan & Fowler, Proc. U.S. Nat. Mus., xxv., 1902, 264 & 266, fig. 2. Nagasaki, Japan.

Di.1/28; A.27; P.12; C.12.

Depth at origin of anal (49 mm.) or below dorsal spine (50) 2.6, second dorsal ray (85) 1.5, in length to root of caudal (130). Gill-opening (10.5) equal to interorbital (10.5). Eye (10) 4.4, dorsal spine (18) 2.4, pectoral (14.5) 3 in head (44).

General form elongate, compressed. Upper profile and interorbital convex. Snout long; mouth small, with separate teeth forming a beak. Nostrils in slits. Gill-opening subequal to eye, situated below dorsal spine. Ventral flap below interdorsal space, not so long as ventral spine. This spine is broken in my specimen, but was evidently movable and prickly. Head and body covered with large scales with rugose surfaces; ventral flap and spine with more scattered asperities. Lateral line indistinct in places, but following the course shown in the accompanying figure. Caudal peduncle higher than long.

Dorsal spine originating over posterior portion of eye; it has a row of

strong spines along each side and numerous asperities along its anterior surface. Soft dorsal and anal fins much elevated anteriorly; second dorsal ray much produced; membranes of fins perforated at base. Pectorals small, rounded. Caudal obtusely rounded, without produced rays.

General colour, after long preservation, brownish with irregular darker markings on back and sides as shown in figure. A fuscous mark on back at middle of interdorsal space and others above and below caudal peduncle. Fins hyaline excepting caudal, which has an angular blackish bar crossing the rays and becoming darker above and below.

Described and figured from a specimen 130 mm. in standard length or nearly $6\frac{1}{2}$ inches in total length. It was trawled a few miles off Bustard Head Lighthouse, Queensland, in 11-16 fathoms, on July 8, 1910. Australian Museum registered number E.1424.

New record for Australia.

This specimen agrees well with Jordan and Fowler's account and figure of *Stephanolepis oblongus* and is evidently conspecific as the only important differences are the more convex snout, extra pectoral ray, produced dorsal ray, and less tapering body of the Queensland specimen. The produced rays of the dorsal and caudal fins and the shape and colours of this species are stated to be variable.

From *Monacanthus curtiorhynchus* Bleeker (Nat. Tijdschr. Ned. Ind., viii., 1855, 430. Amboina), the genotype of *Paramonacanthus*, my specimen differs notably in having deeper body and less pronounced colour-markings. The dorsal spine is shorter than that of *Paramonacanthus garretti* Fowler (Mem. Bish. Mus., x., 1928, 459, fig. 78. Hawaii).

PARAMONACANTHUS OBLONGUS OTISENSIS, new subspecies.

(Plate xxvii., fig. 2).

A series of Queensland specimens, of which one (No. E.1412) is here illustrated, shows a form of this species, apparently not due to sex, which has a deeper body, increased number of fin-rays, and less defined scales. The intestines contain remains of crustacea and algae. The figured specimen differs from the above-described *P. oblongus* in the following particulars.

Di/30; A.32. Depth (49 mm.) 2.16 in length to root of caudal (106). Ventral spine movable, with some prickles at tip and rugose anteriorly. Scales less apparent but body rugose, covered with spines, which may be simple, double, cusped, or with irregular flanges. Lateral line distinct. No produced dorsal ray. First and fifth branched caudal rays produced. General colour dark in tone with a dark margin to ventral flap; dark markings on body and cross-bands on throat more distinct, and bar on caudal lighter than in Bustard Head specimen of *Paramonacanthus oblongus*.

The holotype of this subspecies, on deposit in the Australian Museum, is merely labelled "Queensland," but many other specimens are preserved from off Hervey Bay, Bustard Bay, Fraser Island, and Cowan Cowan, Moreton Bay, southern Queensland; all were trawled by the "Endeavour" in from 9 to 20 fathoms in July and August, 1910.

SCOBINICHTHYS, new genus.

Orthotype, *Balistes granulata* White (Journal of a Voyage to new South Wales, ed. 1, 1790, 295, and fig. New South Wales = Botany Bay).

"Captain Cook's Leatherjacket," called *Balistes granulata* in the appendix to White's *Voyage*, has been the subject of an article by Iredale & Whitley (Austr. Mus. Magazine, iii., 1929, 421). This species has an extremely rough integument, quite unlike that of the Hawaiian *Balistes sandwichiensis* Quoy & Gaimard (Voy. Uran. Physic., Zool., 1824, 214), the type of *Cantherhines* Swainson, 1839, and, as it differs also in general propor-

tions, cannot be retained in that genus. *Balistes granulata* may therefore be nominated the type of *Scobinichthys* and known in future as *Scobinichthys granulatus* (White).

Genus BRACHALUTERES Bleeker, 1866.

BRACHALUTERES FIDENS, new species.

D.i 29; A.26; P.11; C.10 branched rays.

Depth, measured from origin of soft dorsal to that of anal (35.5 mm.), 1.3 in length to root of caudal (48); head (16.5) nearly 3 in same. Eye (5) 3.3 in head or 2 in snout (10). Interorbital (7) wider than length of longest pectoral ray (6.5). Base of soft dorsal (20.5) longer than that of anal (13). Depth of caudal peduncle (10) greater than its length (6).

Depth equal to length to base of caudal fin, due to the downward extension of the baglike ventral flap. Dorsal profile more convex than ventral. A concavity in the profile before the eyes. Interorbital roundly convex. Head and body elevated and strongly compressed, covered with prominent, erect spines with hooked tips and small irregular flanges. Gill-opening oblique, situated under posterior half of eye and on a level with the mouth, its length equal to pectoral base. Mouth small, its width less than diameter of eye. Jaws beaklike, the median pairs of teeth longest and flanked on each side by similar but smaller teeth, forming a median and two lateral points in each jaw. Ventral flap roundly convex, without an exterior pubic spine.

Dorsal spine curved, weak, tapering, rugose, originating over posterior margin of orbit and connected to back by broad membrane. Soft dorsal and anal fins gently rounded, with simple rays. Caudal broadly rounded; its upper and lower rays simple and the ten median rays branched.

General colour green, with about six indistinct horizontal dusky stripes on upper half of sides, and many small dark spots on lower half. Fins plain, except caudal, which has numerous dark brown spots, especially towards its base and border.

Described from the holotype, a specimen 2½ inches in total length, from Shellharbour, New South Wales. Austr. Mus. registered number IA. 1822.

This species is common in New South Wales, especially around wharf piles, where it feeds on small crustacea. The ground colour varies from greenish to brownish and the stripes and spots appear to vary in different specimens. This species has been called *Brachaluteres trossulus* by authors, but the New South Wales form has flanges on the dermal spines which are not shown in *Aleuterius trossulus* Richardson (Zool. Voy. Erebus & Terror, Fish., 1846, 68, pl. xl., figs. 5-6, as *Alutarius*. W. Australia), and its colour-markings, though variable, do not agree with those depicted by Richardson.

Family CANTHIGASTERIDAE.

Genus CANTHIGASTER Swainson, 1839.

CANTHIGASTER AXIOLOGUS, new species.

New name for *Canthigaster cinctus* McCulloch (Mem. Qld. Mus., vii., 1922, 245, pl. xiv., fig. 1), which, as McCulloch suggested by his queried synonymy, is distinct from *Tetrodon cinctus* Richardson (Zool. Voy. Samarang, Fish., 1848, 20. Et Parkinson MS. Tahiti) which is described as having small round dots on the upper surface and on the caudal fin, and two oblique black bars on the forepart of the belly. None of these features applies to McCulloch's species. Richardson had earlier introduced *T. cinctus* as a queried synonym of his *Tetrodon solandri* (Zool. Voy. Sulphur., i., Fish., 1845, 125).

The holotype of *Canthigaster axiologus* is the Queensland Museum specimen, from near the Capricorn Group, Queensland, figured by McCulloch.

ADDENDUM.

The following new generic names are proposed to replace the pre-occupied names of some extra-Australian fishes.

- NEGOGALEUS (fam. Galeidae) for *Hemigaleus* Bleeker, 1852, not *Hemigalea* Blainville, 1837, or *Hemigalus* Jourdain, 1837 (Mammalia). Type, *H. microstoma* Blkr.
- PARAPHOTICHTHYS (fam. Gonostomatidae) for *Manducus* Goode & Bean, 1895, not *Manduca* Huebner, circa 1806 (Lepidoptera). Type, *Gonostoma maderense* Johnson; recently figured by Norman, Discov. Rept., ii., 1930, 294.
- RA (fam. Characinidae, subfam. Ichthyoborinae) for *Ichthyoborus* Günther, 1864, often spelt *Ichthyoborus* by authors, not *Ichthyoborus* Kaup, 1842 (Aves). Type, *I. microlepis* Günther.
- BARBELLION (fam. Cyprinidae) for *Barynotus* Günther, 1868, not Germar, 1817 (Coleoptera). Type, *B. lagensis* Günther.
- NAZATEXICO (fam. Cyprinidae) for *Orcella* Jordan & Evermann, 1896, and *Orcula* J. & E., 1900, both preoccupied, vide Palmer, Ind. Gen. Mamm., 1904, and Sherborn, Ind. Anim., 1929. Type, *Notropis orca* Woolman.
- BORODINULA (fam. Nemichthyidae) for *Avocettina* Jordan & Davies, 1892, not *Avocettinus* Bonaparte, 1850 (Aves). Type, *Nemichthys infans* Günther. Named after Mr. N. A. Borodin.
- FUYANGIA (fam. Coryphaenoididae) for *Chalinura* Goode & Bean, 1883, not Dalman, 1826 (Arachnida). Type, *C. simula* Goode & Bean.
- HUMEFORDIA (fam. Lutjanidae) for *Fares* Jordan, Evermann, & Tanaka, 1927, which is preoccupied by *Fares* Guichenot (Dict. pitt. Hist. Nat., iii., 1835, 164; Nouv. Dict. class. Hist. Nat., ed. 2, xii., July, 1845, 345), another genus of fishes allied to, or synonymous with, *Coryphaena* Linné. *Humefordia* is named after Mr. Alexander Hume Ford, of Honolulu, with *Aphareus thompsoni* Fowler as type.
- HOSPILABRUS (fam. Hospilabridae; near Labridae) for *Malapterus* Cuv. & Val., 1839, preoccupied by Jarocki, 1822, an emendation for *Malapterurus* Lacépède, another genus of fishes. Günther emended *Malapterus* Cuv. & Val. to *Malacopterus*, but this name is preoccupied in Coleoptera.
- STOMOGOBIOUS (fam. Gobiidae) for *Orthostomus* Kner, 1868, not *Orthostoma* Ehrenberg, 1831, or *Orthostomum* Grube, 1840, a genus of Coelenterata. Type, *O. amblyopinus* Kner.
- APHYOGOBIOUS (fam. Gobiidae) for *Latrunculus* Günther, 1861, not Gray, 1847 (Mollusca). Type, *Gobius albus* Parnell (non Cloquet and later authors).
- CASSIGOBIOUS (fam. Gobiidae) for *Lophiogobius* Günther, 1873, not *Lophogobius* Gill, 1862 (Pisces). Type, *Lophiogobius ocellicauda* Günther.
- BRYOZOICHTHYS (fam. Pholidae) for *Bryolophus* Jordan & Snyder, 1902, not Ehrenberg, 1839 (Polyzoa). Type, *B. lysimus* Jordan & Snyder.
- PACHYCARICHTHYS (fam. Zoarcidae) for *Pachycara* Zugmayer, 1911, not *Pachycarus* Solier, 1835 (Coleoptera) and not *Pachycare* Gould, 1876 (Aves). Type, *Pachycara obesus* Zugmayer.
- BUFOCERATIAS (fam. Ceratiidae) for *Phrynichthys* Pietschmann, 1927, not Agassiz, 1846, an emendation for *Bufichthys* Swainson = *Synanceja* Bloch & Schneider, another genus of fishes. Type, *P. wedli* Pietschmann.
- LUCUBRAPISCIS (fam. Canthigasteridae), new subgenus of *Canthigaster* Swainson, replaces *Eumycterias* Jenkins, 1901, not *Eumycterus* Schoenherr, 1838 (Coleoptera). Type, *Eumycterias bitaeniatius* Jenkins.